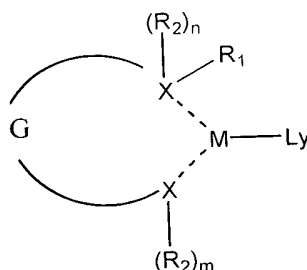


We claim:

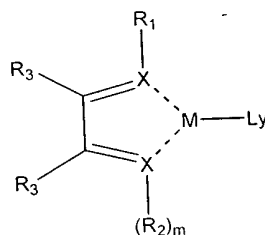
1. A zwitterionic metallocycle comprising a Group 4-10 transition metal chelated to two heteroatoms independently selected from the group consisting of P, N, O, and S wherein the two heteroatoms are each attached to a linking group to form a metallocycle and wherein one of the heteroatoms has a substituent bearing a full or partial negative charge and the transition metal has a full or partial positive charge.
2. The zwitterionic metallocycle of claim 1 wherein the substituent bears a negative charge on an atom selected from the group consisting of B, Al, Sn and Sb.
3. A zwitterionic metallocycle of general formula:



wherein M is a Group 4–10 transition metal bearing a full or partial positive charge, G is a linking group to form a metallocycle, each X is independently selected from the group consisting of P, N, O and S, each R_2 is independently selected from the group consisting of C_1 - C_{30} hydrocarbyl, m is 0, 1 or 2, n is 0 or 1, R_1 contains an atom bearing a full or partial negative charge selected from the group consisting of B, Al, Sn and Sb, L is independently selected from the group consisting of halide, alkoxy, siloxy, alkylamino, and C_1 - C_{30} hydrocarbyl and y satisfies the valence of M .

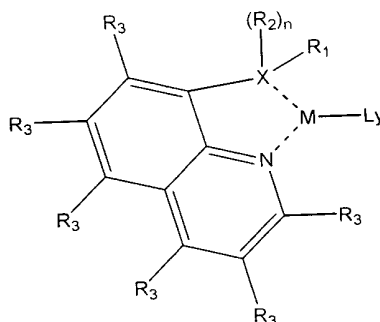
4. The zwitterionic metallocycle of claim 3 wherein G comprises two substituted or unsubstituted sp^2 carbon atoms to form a 5-membered metallocycle.

5. The zwitterionic metallocycle of claim 3 wherein X is N and R₁ contains an atom bearing a full or partial negative charge selected from the group consisting of B and Al.
6. The zwitterionic metallocycle of claim 4 having the general formula:



wherein each R₃ is independently selected from the group consisting of H and C₁-C₃₀ hydrocarbyl and m is 0 or 1.

7. The zwitterionic metallocycle of claim 4 having the general formula:



wherein each R₃ is independently selected from the group consisting of H and C₁-C₃₀ hydrocarbyl.

8. An olefin polymerization process comprising contacting an olefin with a zwitterionic metallocycle comprising a Group 4-10 transition metal chelated to two heteroatoms independently selected from the group consisting of P, N, O, and S wherein the two heteroatoms are each attached to a linking group to form a metallocycle, and wherein one of the heteroatoms has a

substituent bearing a full or partial negative charge and the transition metal bears a full or partial positive charge.

9. The olefin polymerization process of claim 8 wherein the olefin is selected from the group consisting of ethylene, propylene, 1-butene, 1-hexene, 1-octene and mixtures thereof.
10. The olefin polymerization process of claim 8 wherein the olefin is copolymerized with a polar comonomer.
11. The olefin polymerization process of claim 10 wherein the olefin is ethylene and the polar comonomer is selected from the group consisting of carbon monoxide, vinyl silanes, vinyl acetates, acrylates and maleic anhydride.
12. The olefin polymerization process of claim 8 wherein the zwitterionic metallocycle is supported.
13. A slurry olefin polymerization process of claim 8.
14. A gas-phase olefin polymerization process of claim 8.